



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,320	12/12/2003	Bertrand Lion	LOREAL 3.0-003; OA02421/U	2210
530 7590 06/22/2010 LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			EXAMINER BARHAM, BETHANY P	
			ART UNIT 1615	PAPER NUMBER
			MAIL DATE 06/22/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/735,320	Applicant(s) LION, BERTRAND	
	Examiner BETHANY BARHAM	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

Receipt of Applicant's Appeal Brief filed on 05/05/10 is acknowledged. Claims 1-4 and 6-24 are pending. Claims 1-4 and 6-24 are rejected.

Upon further consideration of the finality of the rejection of the last Office action is withdrawn. During the Pre-Appeal Conference held on 09/18/09 it was determined that the rejection of '560 was to be withdrawn in light of the declarations filed (see below), but that the rejection of '446 as evidenced by '517 was to be maintained. However upon further review during the Appeal Conference it was determined that the Final Office Action was not clear on the obviousness statement/reasoning for the 103 rejection over '446 as evidenced by '517, and as such prosecution is hereby reopened in order that the rejection and reasons of obviousness could be clarified.

Response to Declaration

The declarations under 37 CFR 1.132 filed 3/23/09 are sufficient to overcome the rejection of claims 1-4 and 6-24 based upon '560 as set forth in the last Office action because: they show that the medium of decamethylcyclotetrasiloxane and a polymer of comprised of three monomers: i) methylacrylate, ii) methacrylic acid, and iii) monomethacryloxypropylpolydimethylsiloxane have unexpectedly better transfer resistance properties than a composition comprising a non-aqueous silicone medium and a polymer without monomer b) methacrylic acid.

However the declarations are insufficient to overcome the rejection of claims 1-4 and 6-24 based upon '446 as evidenced by '517 as set forth in the last Office action because: they do not show that any unexpected results are obtained by a composition as claimed with a polymer comprising 3 monomers i), ii) and iii) (as above) including i) C1-C3 alkyl (meth)acrylate compared to a composition as taught by '446 as evidenced by '517 which teaches polymer of comprising of three monomers i), ii) and iii) including i) methyl methacrylate or t-butyl(meth)acrylate. Since, the prior art '446 as evidenced by '517 teaches that monomer i) is chosen from methyl methacrylate which is a C1 alkyl methacrylate as instant claimed (among others on pg. 8, lines 24-27) it overlaps with and is obvious in light of the instant claims, absent a showing by Applicant that unexpected results occur when the monomer i) is C1-C3 alkyl methacrylate.

MAINTAINED REJECTIONS

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/23446 ('446), as evidenced by 5,851,517 ('517).

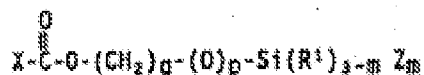
The instant claims are drawn to a dispersion of particles in a non-aqueous, silicone medium comprising an acrylic polymer...comprising i) C1-C3 alkyl (meth)acrylates, ii) (meth)acrylic acid, and iii) one silicone macromonomer of Formula II.

The limitations of claims 1, 3-4, and 7-8 are taught by '446:

- '446 teaches a cosmetic composition comprising adhesive agents which are polysiloxane grafted polymers made by polymerization of polysiloxane containing monomers and non polysiloxane containing monomers, the agent having a weight average molecular weight of at least about 20,000, and 1 to 50% by weight of polysiloxane containing monomer (abstract). '446 teaches that the molecular weight of a vinyl polymer backbone, polydimethylsiloxane macromer is at least about 500, preferably from about 1000 to 100,000, most preferably about 2000 to about 50,000 (pg.5, lines 29-pg. 6, line 7).
- '446 teaches that the polysiloxane grafted polymers comprise 1-50% by weight of polysiloxane monomers and 50-99% by weight of the non-polysiloxane monomers which can be selected from A and B monomers (pg.8, lines 3-8). A monomers are taught by '446 to preferably include n-butyl methacrylate, isobutyl methacrylate, t-butyl methacrylate, 2-ethylhexyl methacrylate, methyl methacrylate, etc, while B monomers include acrylic acid, methacrylic acid, hydroxyethyl methacrylate, etc. (pg. 8, line 9-pg. 9, line 8).
- '446 teaches polymer compositions with monomers A, B and C are dispersible in nonpolar solvents, such as cyclomethicone (pg. 10, line 32-pg. 11, line 2).

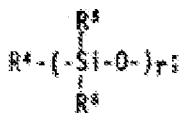
The limitations of claims 6 and 9-15 are taught by '446:

- '446 teaches that the preferred polysiloxane monomer has the formula:



where m is 1-3, (preferably m=1); p is 0 or 1; q is 2-6; R¹ is hydrogen, hydroxyl,

lower alkyl, alkoxy, alkylamino, aryl or alkaryl (preferably alkyl); X is $\begin{array}{c} \text{CH}=\text{C}- \\ | \quad | \\ \text{R}^2 \quad \text{R}^3 \end{array}$; R² is preferably hydrogen R³ is hydrogen, methyl or CH₂COOH (preferably methyl);



and Z is $\begin{array}{c} \text{R}^4 \\ | \\ \text{R}^5 \end{array}$, R⁴, R⁵, and R⁶, independently, preferably lower alkyl, r is an integer of about 5 or higher, preferably 10-1500 (most preferably about 100 to about 250). Most preferably R⁴, R⁵, and R⁶ are methyl, p=0 and q=3 and the level of this monomer is from 1 to about 50%, preferably about 1 to about 40%, more preferably about 2 to about 25% (pg. 9, line 9 to pg. 10, line 15).

- '446 teaches that polymer which are soluble or dispersible in less polar or nonpolar solvents, such as cyclomethicone (which is the silicone oil polydimethylsiloxanes, and evidenced by '517 teaches above as a non-aqueous liquids of Hansen solubility of less than 17 (MPa)^{1/2}) ('446 pg.10, line 30 and '517 col.3, lines 30-55). '446 teaches the compositions preferably comprise about 5-98% monomer A, from 0 to 80%, (most preferably 0 to 20%) of monomer B, and from about 1 to about 40% (preferably 2 to about 25%) of monomer C (pg.10, line 30-pg.11, line 2).

- '446 teaches examples polymers I-III with acrylic and silicone macromers, specifically polymer III is a PDMS macromer (polydimethylsiloxane) polymerized with isobutyl methacrylate, ethylhexylmethacrylate and dimethylmethacrylamide (pg.12, line 7-pg. 13, line 35).

The limitations of 16-19 are taught by '446:

- '446 teaches that the polymeric agent has a weight average molecular weight of at least about 20,000 (abstract, pg. 4, lines 33-35) and that there is no upper limit but most preferably between the limits of about 100,000 and about 750,000 (pg. 5, lines 1-8).
- '446 teaches that the particles are of the size of a few hundred nm or less (pg. 6, lines 27-28).

The limitations of claims 2 and 20-24 are taught by '446:

- A mixture of acceptable carriers are taught by '446 which are suitable for application to the skin and hair are present in the amount of about 0.5-99.5%, most preferably from about 10 to about 98% (col. 15, lines 26-32), such as volatile silicon derivatives, especially siloxanes, such as phenyl pentamethyl disiloxane, methoxypropyl heptmethyl cyclotetrasiloxane, cyclomethicone, dimethicone, etc. (pg. 16, lines 16-25). As evidenced by '517 silicone oils above have a Hansen solubility of less than 17 (MPa)^{1/2} ('517 col.3, lines 30-55).
- '446 teaches additional components such as surfactants, pearlescent aids, coloring agents, oxidizing agents, reducing agents, sequestering agents, perfumes, polymer plasticizing agents, etc (pg. 28, line 22-pg. 29, line 13).

- Examples I-III teach the polysiloxane graft polymer composition in the amount of 4.5% by weight of the composition, example VIII teaches 3%, example XI teaches 4% by weight.
- '446 teaches a product for the hair (hair spray, mousse, tonic, shampoo, conditioner) (pg. 16, lines 1-3) and cosmetic compositions such as make up, mascara, eye liner, nail polish, skin creams and lotions, etc (pg. 4, lines 26-32).
- '446 does not teach an embodiment of A/B/C polymer, wherein A is the instant claims C1-C3 alkyl methacrylate, but '446 does teach that A can be methylmethacrylate.

A reference is analyzed using its broadest teachings. MPEP 2123 [R-5].

"[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious". KSR v. Teleflex, 127 S.Ct. 1727, 1740 (2007)(quoting Sakraida v. A.G. Pro, 425 U.S. 273, 282 (1976)). "[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious", the relevant question is "whether the improvement is more than the predictable use of prior art elements according to their established functions." (Id.).

Addressing the issue of obviousness, the Supreme Court noted that the analysis under 35 USC 103 "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." KSR v. Teleflex, 127 S.Ct.

1727, 1741 (2007). The Court emphasized that “[a] person of ordinary skill is... a person of ordinary creativity, not an automaton.” Id. at 1742.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the disclosed components of ‘446 as evidenced by ‘517 to obtain a polymer of A/B/C dispersed in a silicone and substitute the disclosed methyl methacrylate (pg. 8, line 26-27) for the monomer A (t-butyl acrylate) in the Experimental A polymer with predictable results. Simple substitution of one disclosed monomer A for another within the disclosure is within the purview of the skilled artisan and would yield predictable results.

Response to Arguments

Applicant's arguments with respect to claims 1-4 and 6-24 have been considered and are not persuasive to overcome the previous 103 rejection over ‘446 as evidenced by ‘517. Applicant argues that the ‘446 art does not teach C1-C3 alkyl (meth)acrylate monomers and one or more additional monomers selected from...acrylic and methacrylic acid. The Examiner respectfully disagrees, as detailed above ‘446 teaches polymer compositions with monomers A (such as methyl methacrylate), monomer B (such as acrylic acid, methacrylic acid) and monomer C (silicone marcomonomer) dispersible in nonpolar solvents, such as cyclomethicone (pg. 10, line 32-pg. 11, line 2). The lack of an identical example of the instant claims in ‘446 is not a teaching away as the whole disclosure is considered in the rejection and is not limited solely to the examples.

The Applicant is right that Experimental A is not identical to the instant amended claims, it teaches 60/20/20 of t-butyl acrylate/acrylic acid/PMDS (of monomers A/B/C), but the Examiner respectfully points out monomer A taught by the specification of '446 also includes methyl methacrylate (a C1 alkyl methacrylate as instant claimed) as a preferred monomer. Therefore, rearrangement within '446 Experimental A and substitution of one preferred A monomer (t-butyl acrylate) of '446 for another methylmethacrylate would be obvious to a skilled artisan and would yield predictable results. Applicant has not shown that the claimed C1-C3 alkyl methacrylate monomer results in unexpected results or that such a substitution is unpredictable or non-obvious.

Applicant also argues that '446 does not explicitly teach non-aqueous solutions and that the disclosure of silicone as a carrier media does not mean that the media are non-aqueous. The Examiner respectfully disagrees as '446 teaches that the silicone-grafted polymers as made are either (a) soluble in aqueous formulation or (b) soluble or dispersible in solvents such as cyclomethicone (pg. 10, lines 20-31), which encompasses the instant claims. The mere fact that Applicant instant claims only polymers dispersed in solvents like cyclomethicone is not novel or patentable over '446, which teaches dispersion in cyclomethicone or water. Further, '446 teaches that volatile silicone derivatives, especially siloxanes are preferred solvents for dispersing the silicone-grafted polymer (pg. 16, lines 16-25).

Applicant further argues that '446 Examples IX and X teach away from applicant's invention as they teach compositions comprising water and comprise the Exp. B polymer (without methacrylic acid), however the Examiner respectfully reiterates

that the reference '446 is not limited to the Examples but rather the whole disclosure is considered and it teaches that the polymers are dispersible in cyclomethicone type polymers. Further, the mere fact that water can further be added to make the personal care composition is not outside the bounds of the instant claims; as an aside Applicants Instant Example 8 contains large amounts of water in a personal care composition to which the silicone containing polymer dispersion is added.

Applicant further argues that inclusion of the '517 reference in the '446 rejection is incorrect. The Examiner respectfully points out that the '517 reference is simply relied upon to clarify that the silicone solvents (such as cyclomethicone or polydimethylsiloxane, etc) taught by '446 inherently have the global solubility parameter according to the Hansen solubility space of less than or equal to 17 (MPa)^{1/2}('446 pg.10, line 30 and '517 col.3, lines 30-55). A reliance on a reference to show that a physical property is inherent is not incorrect and as such the rejection stands. The claims remain rejected over '560 and also by '446 as evidenced by '517.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bethany Barham whose telephone number is (571)272-6175. The examiner can normally be reached on M-F, 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on 571-272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bethany Barham
Art Unit 1615

/Robert A. Wax/
Supervisory Patent Examiner, Art Unit 1615